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TITLE: Semiconductor device e.g. CMOS circuit, has oxide/nitride silicon film on substrate, in which ratio of density of nitrogen corresponding to that of silicon is specific value

PATENT-ASSIGNEE: SEMICONDUCTOR ENERGY LAB[SEME]

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PATENT-FAMILY:

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JP 2000340799	December 8, 2000	N/A	018	H01L 029/786

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APPLICATION-DATA:

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ABSTRACTED-PUB-NO: JP2000340799A

BASIC-ABSTRACT: NOVELTY - An oxide/nitride silicon film (101a) is formed on a semiconductor substrate (100), on which silicon oxide film (101b) is then formed. The ratio of density of nitrogen corresponding to the density of silicon in oxide/nitride silicon film is 0.3 or more and 1.6 or less.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for semiconductor device manufacturing method.

USE - Semiconductor device e.g. CMOS circuit.

ADVANTAGE - Controls the composition ratio of silicon, oxygen and nitrogen of oxide/nitride silicon film formed on the surface of substrate. Hence materializes favorable electrical property. Enables producing TFT of high reliable nature. Moreover, raises the reliability of the semiconductor device

using TFT and prevents the degradation of TFT.

DESCRIPTION OF DRAWING(S) - The figure shows the sectional view of production process of CMOS circuit.

Semiconductor substrate 100

Oxide/nitride silicon film 101a

Silicon oxide film 101b

CHOSEN-DRAWING: Dwg.1/16

TITLE-TERMS:

SEMICONDUCTOR DEVICE CMOS CIRCUIT OXIDE NITRIDE SILICON FILM
SUBSTRATE RATIO

DENSITY NITROGEN CORRESPOND SILICON SPECIFIC VALUE

DERWENT-CLASS: L03 P81 P85 U11 U12 U14

CPI-CODES: L04-C12A; L04-C12B;

EPI-CODES: U11-C05B5; U11-C18A3; U12-B03A; U14-K01A2B;

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